

REMARKS

Claims 1-8 are now pending in this application for which applicant seeks reconsideration.

Amendment

Claims 1-5 have been amended to improve their form, readability, and clarity. In this respect, independent claims 1 and 5 have been amended to positively define that the speaker units are driven according to weight coefficients provided by a Bessel function to generate a substantially spherical sound emission pattern at the listening position. New claims 7 and 8 further define the array speaker configuration. No new matter has been introduced.

Art Rejection

Claims 1-5 were rejected under 35 U.S.C. § 103(a) as unpatentable over Eberbach (USP 5,809,150) in view of Yanagawa (USP 5,233,664). Applicant traverses this rejection because these references would not have disclosed or taught separately driving an array speaker comprising a plurality of speaker units with only the front channel signals (claim 1) or the first audio signal (claim 5) according to the weight coefficients provided by a Bessel function, while driving the rear channel signals (claim 1) or the second audio signal (claim 5) with a different processing from the Bessel function.

The examiner states that Eberbach discloses the basic structural elements of a surround sound system but fails to disclose driving the speaker units using a Bessel function. In this respect, the examiner relied upon Yanagawa for the proposition that incorporating a Bessel function to apply weights to improve sound would have been obvious.

First, applicant disagrees with the examiner's assessment of Eberbach at least because Eberbach does not disclose an array speaker.

Second, the claimed invention calls for more than merely driving speaker units according to the weight coefficients provided by the a Bessel function. Indeed, independent claims 1 and 5 each call for driving only the front channel signals or the first audio signal according to the weight coefficients provided by the Bessel function to generate a spherical sound emission pattern, while driving the other signals, namely the rear channel signals or the second signal, to provide a sound beam. Applicant submits that the combination would not have disclosed or taught these features even if the combination were to teach the array speaker.

Yanagawa indeed discloses using a Bessel function to control directivity in a speaker array. The issue germane to patentability is not whether driving speakers using a Bessel function would have been known, but whether driving a particular signal(s) among at least

several different signals to achieve the sound patterns as set forth in independent claims 1 and 5 would have been obvious. Applicant submits that neither of the applied references would have disclosed or taught selectively driving certain signals according to the weight coefficients provided by the Bessel function while not driving other signals according to the Bessel function. Accordingly, the combination would not have disclosed or taught the claimed invention.

Moreover, new claims 7 and 8 further define the configuration of the array speaker. Applicants submit that the applied references also would not have disclosed or taught the claimed array speaker configuration.

Conclusion

Applicant submits that claims 1-7 patentably distinguish over the applied references and are in condition for allowance. Should the examiner have any issues concerning this reply or any other outstanding issues remaining in this application, applicant urges the examiner to contact the undersigned to expedite prosecution.

Respectfully submitted,

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22 MAY 2008

DATE

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REG. NO. 34,079 (RULE 34, WHERE APPLICABLE)

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